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FEDERAL COMMUNICATIONS COMMISSION  
OFFICE OF THE SECRETARY

Before the  
Federal Communications Commission  
Washington, D.C. 20554

In the Matter of	)	
	)	
Amendment of the Commission's Rules	)	GEN Docket No. 90-314
to Establish New Personal Communications	)	ET Docket No. 92-100
Services, Narrowband PCS	)	
	)	
Implementation of Section 309(j) of the	)	PP Docket No. 93-253
Communications Act - Competitive Bidding,	)	
Narrowband PCS	)	

To the Commission:

**COMMENTS OF FREESPACE COMMUNICATIONS, LLC**

FreeSpace Communications, LLC (FreeSpace), by its attorneys, hereby submits these comments in response to the *Second Report and Order and Second Further Notice of Proposed Rulemaking (Second R&O/Second FNPRM)* issued on May 18, 2000 in the above captioned proceeding. The Commission seeks comment on whether to channelize and license the one megahertz of narrowband PCS spectrum held in reserve. The Commission also seeks comment on whether to rechannelize the unlicensed narrowband PCS spectrum already available in order to create larger spectrum blocks.

**I. INTRODUCTION**

FreeSpace has developed a new, innovative wireless communications technology that will provide consumers inexpensive high-speed voice and data services, including Internet connections. The FreeSpace network is comprised of handsets and modems that transmit wireless data and voice services to consumers from small antennas that are mounted on either existing transmission towers or small base stations located throughout a community. These base stations can be linked to the Internet through high speed Internet connections.

The recent emergence of new information technologies, especially in wireless communications, will greatly benefit consumers. These new wireless services, however, have dramatically increased the demand for spectrum. In an effort make more spectrum available for new wireless services, the Commission should channelize and license the remaining one MHz of narrowband PCS spectrum held in reserve. Making this spectrum available will give new companies, including small businesses, the opportunity to offer new and innovative services. Furthermore, licensing the remaining spectrum will facilitate competition by giving consumers expanded service options.

The Commission should also channelize both the reserve and unlicensed narrowband PCS spectrum in blocks larger than those currently in existence. Specifically, the Commission should license this spectrum in the most flexible manner possible, either by licensing it in a single 1 MHz block or in two 500 kHz channel blocks. Creating these larger channel blocks will give licensees the flexibility to determine the most valuable use for their spectrum and offer innovative new services to consumers.

## **II. BACKGROUND**

In 1993, the Commission allocated three MHz of spectrum for narrowband PCS. Only two MHz of this spectrum was divided into channels and made available for licensing. The remaining one MHz of narrowband PCS spectrum is currently reserved to accommodate future development of narrowband PCS.<sup>1</sup> However, in the *Narrowband PCS R&O/Further Notice*, the Commission tentatively concluded that the one MHz of reserve spectrum should be channelized and licensed.<sup>2</sup>

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<sup>1</sup> *Amendment of the Commission's Rules to Establish New Personal Communication Services*, First Report and Order, GEN Docket No. 90-314, 8 FCC Rcd 7162, ¶ 19 (1993) (*PCS First Report and Order*).

<sup>2</sup> *Narrowband PCS R&O/Further Notice*, 12 FCC Rcd 12972, 12991, ¶ 34 (1997).

The Commission reaffirmed this tentative conclusion in the *Second R&O/Second FNPRM*, stating that the explosive growth of wireless communications has dramatically increased the demand for spectrum, leaving very little unencumbered spectrum available for new services.<sup>3</sup> The Commission has asked for comment on whether the reserve spectrum should be made available to those interested in bringing new and innovative services to the public.

The Commission also seeks comments on how the reserve spectrum should be channelized. The Commission has proposed creating blocks of channels larger than those currently in existence, namely two 300 kHz and one 400 kHz license. Moreover, the Commission seeks comment on whether the remaining unlicensed narrowband PCS spectrum that has already been channelized should be rechannelized to create licenses that authorize the use of larger blocks of spectrum. The Commission has indicated that new and innovative service providers may find larger channel blocks useful and allow narrowband PCS licensees to compete against other wireless sectors.<sup>4</sup>

### **III. FREESPACE STRONGLY SUPPORTS THE TENTATIVE CONCLUSION TO LICENSE AND CHANNELIZE THE ONE MEGAHERTZ OF PCS NARROWBAND SPECTRUM HELD IN RESERVE.**

Making available the remaining one MHz of narrowband PCS spectrum will promote new wireless services by opening the market to new licensees and allowing new, innovative narrowband PCS services to be offered. FreeSpace strongly supports the Commission's tentative conclusion to license and channelize the one MHz of narrowband PCS held in reserve. As the Commission has recognized, there is very little unencumbered spectrum available for new services due to the tremendous growth in wireless communications.<sup>5</sup>

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<sup>3</sup> *Second R&O/Second FNPRM*, at ¶ 81.

<sup>4</sup> *See id.* at ¶ 83.

<sup>5</sup> *See id.* at ¶ 82.

Consequently, more spectrum, including the one MHz of reserve narrowband PCS spectrum, needs to be made available for new entrants and services.

The demand for innovative services, especially wireless data service, is strong and continues to experience tremendous growth. Capital investment in the wireless mobile industry alone has more than quadrupled since 1993 for a cumulative total of over \$60 billion through 1998.<sup>6</sup> Furthermore, many carriers are attempting to enter the mobile wireless data market to provide valuable added services that would differentiate their products from competitors.<sup>7</sup> A number of new product announcements for mobile wireless data services along with joint ventures indicate that the industry is trying to expand.<sup>8</sup>

At the same time, there is a severe shortage of spectrum to deploy these wireless data services. Due to the finite nature of spectrum, "new services . . . have had to be implemented either through sharing with existing operations or through reallocation of spectrum from existing services to new services and technology."<sup>9</sup> The shortage of spectrum is readily apparent in the 900 MHz spectrum band, which has ideal propagation characteristics for fixed and mobile wireless services.

Furthermore, much of the other spectrum below 1 GHz is tied up by existing users, such as broadcast and private radio. The FCC has attempted to make more of this spectrum available by reallocating spectrum in the 700 MHz band from its previous use solely for broadcasting service.<sup>10</sup> However, approximately 100 existing television stations currently

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<sup>6</sup> See Principles for Reallocation of Spectrum to Encourage the Development of Telecommunications Technologies for the New Millennium, *Policy Statement*, FCC 99-354 (released Nov. 22, 1999) at ¶ 1 (*Policy Statement*).

<sup>7</sup> See Implementation of Section 6002(b) of the Omnibus Budget Reconciliation Act of 1993, annual Report and Analysis of Competitive Market Conditions With Respect to Commercial Mobile Services, *Fourth Report*, 14 FCC Rcd 14145 (released June 24, 1999) (*Fourth Report*).

<sup>8</sup> See *id.*

<sup>9</sup> *Policy Statement*, at ¶ 5.

<sup>10</sup> See Service Rules for the 746-764 and 776-794 MHz Bands, and Revisions to Part 27 of the Commission's Rules, WT Docket No. 99-168, *First Report and Order*, 15 FCC Rcd 476 (2000) (*700 MHz First Report and Order*).

encumber the spectrum being made available, and they may remain in the 700 MHz band until 2007 or later.<sup>11</sup> As a consequence, "[i]n no part of the country is this band totally unencumbered; in certain parts of the country, particularly metropolitan areas, very little of this band is presently available."<sup>12</sup>

The Commission has recognized the importance of promoting competition and encouraging "the development of emerging telecommunication technologies as we enter the next century."<sup>13</sup> Making the reserve PCS spectrum available will accomplish this goal by facilitating competition and opening the market to new entrants, especially small businesses like FreeSpace, who have developed innovative wireless technologies. By opening up the reserve spectrum to entrepreneurial enterprises such as FreeSpace, the Commission will encourage the development of narrowband PCS and expand service options available to consumers.

#### **IV. FREESPACE STRONGLY SUPPORTS A CHANNELIZATION PLAN THAT MAXIMIZES LICENSEE FLEXIBILITY.**

The Commission should establish flexible licensing rules that create larger channel blocks for narrowband PCS spectrum. Allowing the market to determine the optimal channel size for the available spectrum ensures that this highly valuable resource can be put to its most highly valued use. The Commission has recognized that the use of relaxed service rules would create flexibility in the spectrum market and allow licensees greater freedom in determining the specific services to be offered.<sup>14</sup> Accordingly, FreeSpace

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<sup>11</sup> See *Policy Statement*, at ¶ 25. Existing TV service and the service of new digital television (DTV) stations will continue on channel allotments in the 700 MHz band until at least December 31, 2006, when the transition to DTV service is scheduled to end and all television stations are to be located on channels in the DTV core spectrum (Channels 2-51).

<sup>12</sup> *700 MHz First Report and Order*, 15 FCC Rcd 476 at ¶ 52.

<sup>13</sup> *Policy Statement*, at ¶ 2.

<sup>14</sup> See *ixd.* at ¶ 9.

strongly endorses the Commission's proposal to create channel blocks larger than those currently established.

The Commission has requested comment on how to channelize the one megahertz of narrowband PCS spectrum that has been held in reserve. FreeSpace proposes that the Commission license this spectrum in a single 1 MHz block, or, alternatively, in two 500 kHz blocks. The creation of larger licensing blocks maximizes a licensee's flexibility, permitting it to respond to marketplace forces. This in turn will ensure that the spectrum is put to its most efficient and innovative use.

The Commission has acknowledged the importance of encouraging "the development and deployment of new, more efficient technologies that will increase the amount of information that can be transmitted in a given amount of bandwidth."<sup>15</sup> The creation of larger licensing blocks will achieve this end. Companies, such as FreeSpace, that have developed ground-breaking services that require larger channel blocks will be able to offer this technology to the public. At the same time, users who desire smaller channels can channelize the spectrum to meet their particular service needs and also employ the spectrum disaggregation rules that will be permitted for the narrowband PCS spectrum. Hence, the creation of larger licensing blocks will increase flexibility to licensees and allow the forces of the marketplace to determine whether it is economically and technically feasible to create smaller channels.

The Commission also sought comment on whether to rechannelize the narrowband PCS spectrum already available in order to create larger spectrum blocks. FreeSpace strongly supports this proposal and recommends that the spectrum be channelized into larger blocks as well. As discussed above, creating channel blocks larger than those

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<sup>15</sup> *Id.* at ¶ 7.

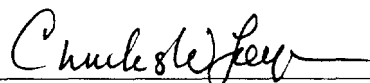
currently in existence will foster innovation by increasing the amount of spectrum available for new high-valued uses. Moreover, it would assist narrowband PCS licensees in competing against other wireless sectors by offering them a great deal of flexibility in the use of their spectrum.

## **V. CONCLUSION**

The Commission should make available the one MHz of narrowband PCS spectrum held in reserve so it can be used to offer new and innovative services. Furthermore, the Commission should establish 1 MHz licensing blocks, or at least two 500 kHz channel blocks, on this reserve spectrum as well as on the remaining unlicensed narrowband PCS spectrum to create flexibility so the market can best decide the proper use for this spectrum. By adopting the preceding course of action, the Commission would allow the narrowband PCS spectrum market to become more efficient and increase the amount of spectrum available for the use of developing wireless services.

Respectfully submitted,

FREESPACE COMMUNICATIONS, LLC



Charles W. Logan  
Lawler, Metzger & Milkman, LLC  
1909 K Street, NW, Suite 820  
Washington, DC 20006  
(202) 777-7700

Counsel for FreeSpace Communications, LLC

July 19, 2000